UNITED STATES PATENT AND TRADEMARK OFFICE

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10/826,161	04/15/2004	Hua-Jun Zeng	MS1-1889US	8616

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LEE & HAYES PLLC 421 W RIVERSIDE AVENUE SUITE 500 SPOKANE, WA 99201	FLEURANTIN, JEAN B

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SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/23/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 February 2007</u>.

2a)☐ This action is **FINAL**.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-52</u> is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-12, 15-26, 29-40 and 43-51</u> is/are rejected.

7)☒ Claim(s) <u>13, 14, 27, 28, 41, 42 and 52</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
　　Paper No(s)/Mail Date <u>10/6 & 12/6 & 2/7</u>.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____ .

DETAILED ACTION

Response to Amendment

1.   This is in response to applicant's amendment filed 2/06/07.

This following is the status of claims:

Claims 1-52 remain pending for examination.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 10/10/06,12/19/06 & 2/06/07. The

submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure

statement is being considered by the examiner.

The specification has not been checked to the extent necessary to determine the presence of all

possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant

may become aware in the specification.

Claim Objections

Claim 19, line 2, is objected to because of the terms "and/or".

The Examiner suggests the applicant to amend the claims in order to be specific.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-12, 15-26, 29-40 and 43-51 are rejected under 35 U.S.C. 103(a) as being unpatentable

over "Image retrieval by hypertext links" issued to Hamandas et al., ("Harmandas") in view of U.S. Pat.

No. 5,845,278 issued to Kirsch et al., ("Kirsch").

As per claim 1, Harmandas discloses "a method providing computer-implemented content

propagation for enhanced document retrieval" (i.e., retrieval system; see page 297, col. 2, paragraph

[2.2], lines 16-18), the method comprising:

"identifying reference information directed to one or more documents, the reference information

being identified from one or more sources of data independent of a data source comprising the one or

more documents" (i.e., identifying documents in the collections and their links; see page 297, col. 2,

paragraph [2.2], lines 27-28);

"extracting metadata that is proximally located to the reference information" (i.e., queries all

relevant images were retrieved near top document ranking; see page 301, col. 2, paragraph [3.3.3], lines

12-14);

"calculating relevance between respective content of associated ones of the one or more

documents" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire

paragraph [3.3.2] and Figs. 8 and 9), further, in page 301, col. 2, paragraph [3.3.3], lines 12-17,

Hamandas discloses it was found that many of the queries all relevant images were retrieved near to the

top of the document ranking (i.e., relevance of feature from respective portion of document representation

of each document based on document citing and cited by it; page 296, col. 2, last paragraph);

and "wherein the indexing generates one or more enhanced documents" (i.e., images being

indexing; see page 298, col. 2, paragraph [2.2.1], lines 12-19 and Fig. 3);

"analyzing the one or more enhanced documents to locate relevance information based on a search query; analyzing the one or more enhanced documents to locate relevance information based on a search query" (see page 301, col. 2, paragraph [3.3.3]);

"ranking the one or more enhanced documents based on relevance scores" (see page 296, col. 2, last paragraph); and

"communicating ranked results and snippet descriptions for the one or more enhanced documents, based on the search query" (see page 301, col. 2, paragraph [3.3.3]).

Harmandas fails to explicitly disclose each document of the one or more documents, indexing associated portions of the metadata along with relevance scores, into original content of the document, for each document of the one or more documents. However, Kirsch discloses each document of the one or more documents, indexing associated portions of the metadata along with relevance scores, into original content of the document, for each document of the one or more documents (see col. 15, lines 55-62). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the method of Harmandas by each document of the one or more documents, indexing associated portions of the metadata along with relevance scores, into original content of the document, for each document of the one or more documents as disclosed by Kirsch (see Kirsch col. 11, line 36 to col. 12, line 44). Such a modification would allow the method of Harmandas to provide an efficient and effective method of selecting the likely most relevant collections for searching (see Kirsch col. 4, lines 39-41), therefore, improving the accuracy of the content propagation for enhanced document retrieval.

As per claim 2, Hamandas discloses "the reference information comprises at least one of a link and/or substantially unique document ID associated with a document of the one or more documents" (i.e., links in a hypermedia document; see page 297, col. 1, lines 11-12).

As per claim 3, Hamandas discloses "the one or more documents comprise at least one of are knowledge base article(s), product help, task, and/or developer data" (i.e., images in a page are semantically related to the textual content; see page 298, col. 2, paragraph [2.2.2], lines 1-2).

As per claim 4, Hamandas discloses "the one or more sources of data comprise <u>at least one of</u> service request(s), newsgroup posting(s), and/or search query log(s)" (i.e., queries collections; see page 301, col. 2, paragraph [3.3.3], lines 12-14).

As per claim 5, Hamandas discloses "the metadata <u>at least one of</u> semantically and/or contextually related to associated ones of the one or more documents" (i.e., links in a hypermedia document share properties, relationships; see page 297, col. 1, lines 11-14).

As per claim 6, in addition to claim 5, Hamandas further discloses "a title, product problem context, and/or product problem resolution information" (In light the specification at [0032], the purposed of product problem resolution information is for formulating search query. The method for collecting search query is disclosed by Hamandas see page 300, col. 1, paragraph [3.2] up to col. 2, line 1).

As per claim 7, Hamandas discloses "for each enhanced document of the one or more enhanced documents, there is a corresponding original document from which the enhanced document was generated" (In light the specification at [0032], the purposed of enhancing document is for ranking relevances. The method of ranking is disclosed by Hamandas page 299, col. 1, first paragraph).

As per claim 8, Hamandas discloses "calculating the relevance is based on how many times a particular document of the one or more documents is identified within its context in the metadata" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 9, in addition to claim 6, Hamandas discloses "article title(s), product problem context, and/or product problem resolution information" (In light the specification at [0032], the purposed of product problem resolution information is for formulating search query. The method for collecting search query is disclosed by Hamandas see page 300, col. 1, paragraph [3.2] up to col. 2, line 1), and

"wherein calculating relevance further comprises weighting the article title(s) and/or product problem context to indicate a greater relevance than any product problem resolution information" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 10, Hamandas discloses "calculating relevance further comprises assigning greater relevance to feature(s) of the metadata that occur in content of the data source with greater frequency as compared to the frequency of occurrence of other metadata features in the content" (In light the specification at [0039], the purposed of calculating relevance is for assigning weight, ranking to determine frequencies. The method of using statistic based on all possible combinations of weights is disclosed by Hamandas page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 11, Hamandas discloses "calculating relevance further comprises assigning greater weight to feature(s) of the metadata found in a document of the one or more documents as a function of an age of the document" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 12, in addition to claims 1 and 4, Hamandas further discloses "identifying search queries from the search query log, wherein the search queries have a relatively high frequency of occurrence (FOO) to search the data source" (In light the specification at [0039], the purposed of calculating relevance is for assigning weight, ranking to determine frequencies. The method of using statistic based on all possible combinations of weights is disclosed by Hamandas page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9);

"determining article(s) selected by an end-user from search query results, the article(s) being from the data source" (i.e., queries all images relevant to each query; see page 300, col. 1, paragraph [3.2], lines 1-3); and

"determining missing end-user selection(s), where a missing end-user selection is an article in the

search query results that was not selected" (i.e., user's search; page 298, col. 2, last paragraph, lines 4-7).

As per claim 15, the limitations of claim 15 are similar to claim 1, therefore, the limitations of claim 15 are rejected in the analysis of claim 1, and this claim is rejected on that basis.

As per claim 16, Hamandas discloses "the reference information comprises at least one of a link and/or substantially unique document ID associated with a document of the one or more documents" (i.e., links in a hypermedia document; see page 297, col. 1, lines 11-12).

As per claim 17, Hamandas discloses "the one or more documents comprises at least one of are knowledge base article(s), product help, task, and/or developer data" (i.e., images in a page are semantically related to the textual content; see page 298, col. 2, paragraph [2.2.2], lines 1-2).

As per claim 18, Hamandas discloses "the one or more sources of data comprise at least one of service request(s), newsgroup posting(s), and/or search query log(s)" (i.e., queries collections; see page 301, col. 2, paragraph [3.3.3], lines 12-14).

As per claim 19, Hamandas discloses "metadata is semantically and/or contextually related to associated ones of the one or more documents" (i.e., links in a hypermedia document share properties, relationships; see page 297, col. 1, lines 11-14).

As per claim 20, Hamandas discloses "the metadata comprises at least one of a title of a document, product problem context, and/or product problem resolution information" (In light the specification at [0032], the purposed of product problem resolution information is for formulating search query. The method for collecting search query is disclosed by Hamandas see page 300, col. 1, paragraph [3.2] up to col. 2, line 1).

As per claim 21, Hamandas discloses "for each enhanced document of the one or more enhanced documents, there is a corresponding original document from which the enhanced document was generated" (In light the specification at [0032], the purposed of enhancing document is for ranking relevances. The method of ranking is disclosed by Hamandas page 299, col. 1, first paragraph).

As per claim 22, Hamandas discloses "calculating the relevance is based on how many times a particular document of the one or more documents is identified within its context in the metadata" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 23, Hamandas discloses "the metadata comprises <u>at least one of</u> article title(s), product problem context, and/or product problem resolution information" (In light the specification at [0032], the purposed of product problem resolution information is for formulating search query. The method for collecting search query is disclosed by Hamandas see page 300, col. 1, paragraph [3.2] up to col. 2, line 1), and "wherein calculating relevance further comprises weighting the article title(s) and/or product problem context to indicate a greater relevance than any product problem resolution information" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 24, Hamandas discloses "calculating relevance further comprises assigning greater relevance to feature(s) of the metadata that occur in content of the data source with greater frequency as compared to the frequency of occurrence of other metadata features in the content" (In light the specification at [0039], the purposed of calculating relevance is for assigning weight, ranking to determine frequencies. The method of using statistic based on all possible combinations of weights is disclosed by Hamandas page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 25, Hamandas discloses "calculating relevance further comprises assigning greater weight to feature(s) of the metadata found in a document of the one or more documents as a function of an age of the document" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 26, in addition to claims 1 and 4, Hamandas further discloses "identifying search queries from the search query log, wherein the search queries have a relatively high frequency of occurrence (FOO) to search the data source" (In light the specification at [0039], the purposed of calculating relevance is for assigning weight, ranking to determine frequencies. The method of using statistic based on all possible combinations of weights is disclosed by Hamandas page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9);

"determining article(s) selected by an end-user from search query results, the article(s) being from the data source" (i.e., queries all images relevant to each query; see page 300, col. 1, paragraph [3.2], lines 1-3); and

"determining missing end-user selection(s), where a missing end-user selection is an article in the search query results that was not selected" (i.e., user's search; page 298, col. 2, last paragraph, lines 4-7).

As per claim 29, in addition to claim 1, Hamandas further discloses "a computing device providing content propagation for enhanced document retrieval" (i.e., retrieval system; see page 297, col. 2, paragraph [2.2], lines 16-18), the computing device comprising:

"a processor" (i.e., a network, multiple nodes; see Fig. 2);

"a memory coupled to the processor, the memory comprising computer program instructions executable by the processor" (i.e., a network, textual and non textual interconnecting nodes; adapting to any application; see page 297, col. 2, paragraph [2.2] up to line 28 and Fig. 2).

As per claim 30, Hamandas discloses "the reference information comprises at least one of a link and/or substantially unique document ID associated with a document of the one or more documents" (i.e., links in a hypermedia document; see page 297, col. 1, lines 11-12).

As per claim 31, Hamandas discloses "the one or more documents are comprise at least one of knowledge base article(s), product help, task, and/or developer data" (i.e., images in a page are semantically related to the textual content; see page 298, col. 2, paragraph [2.2.2], lines 1-2).

As per claim 32, Hamandas discloses "the one or more sources of data comprise at least one of service request(s), newsgroup posting(s), and/or search query log(s)" (i.e., queries collections; see page 301, col. 2, paragraph [3.3.3], lines 12-14).

As per claim 33, Hamandas discloses "metadata is at least one of semantically and/or contextually related to associated ones of the one or more documents" (i.e., links in a hypermedia document share properties, relationships; see page 297, col. 1, lines 11-14).

As per claim 34, Hamandas discloses "the metadata is comprises at least one of a title of a document, product problem context, and/or product problem resolution information" (In light the specification at [0032], the purposed of product problem resolution information is for formulating search query. The method for collecting search query is disclosed by Hamandas see page 300, col. 1, paragraph [3.2] up to col. 2, line 1).

As per claim 35, Hamandas discloses "for each enhanced document of the one or more enhanced documents, there is a corresponding original document from which the enhanced document was generated" (In light the specification at [0032], the purposed of enhancing document is for ranking relevances. The method of ranking is disclosed by Hamandas page 299, col. 1, first paragraph).

As per claim 36, Hamandas discloses "calculating the relevance is based on how many times a particular document of the one or more documents is identified within its context in the metadata" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 37, Hamandas discloses "the metadata comprises at least one of article title(s), product problem context, and/or product problem resolution information" (In light the specification at [0032], the purposed of product problem resolution information is for formulating search query. The method for collecting search query is disclosed by Hamandas see page 300, col. 1, paragraph [3.2] up to col. 2, line 1), and "wherein calculating relevance further comprises weighting the article title(s) and/or product problem context to indicate a greater relevance than any product problem resolution information" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 38, Hamandas discloses "calculating relevance further comprises assigning greater relevance to feature(s) of the metadata that occur in content of the data source with greater frequency as compared to the frequency of occurrence of other metadata features in the content" (In light the specification at [0039], the purposed of calculating relevance is for assigning weight, ranking to determine frequencies. The method of using statistic based on all possible combinations of weights is disclosed by Hamandas page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 39, Hamandas discloses "calculating relevance further comprises assigning greater weight to feature(s) of the metadata found in a document of the one or more documents as a function of an age of the document" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 40, in addition to claims 1 and 4, Hamandas further discloses "identifying search queries from the search query log, wherein the search queries have a relatively high frequency of occurrence (FOO) to search the data source" (In light the specification at [0039], the purposed of calculating relevance is for assigning weight, ranking to determine frequencies. The method of using statistic based on all possible combinations of weights is disclosed by Hamandas page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9);

"determining article(s) selected by an end-user from search query results, the article(s) being from the data source" (i.e., queries all images relevant to each query; see page 300, col. 1, paragraph [3.2], lines 1-3); and

"determining missing end-user selection(s), where a missing end-user selection is an article in the search query results that was not selected" (i.e., user's search; page 298, col. 2, last paragraph, lines 4-7).

As per claim 43, in addition to claim 1, Hamandas further discloses "a computing device providing content propagation for enhanced document retrieval" (i.e., retrieval system; see page 297, col. 2, paragraph [2.2], lines 16-18).

As per claim 44, Hamandas discloses "the reference information comprises at least one of a link and/or substantially unique document ID associated with a document of the one or more documents" (i.e., links in a hypermedia document; see page 297, col. 1, lines 11-12).

As per claim 45, Hamandas discloses "the one or more documents comprise at least one of are knowledge base article(s), product help, task, and/or developer data" (i.e., images in a page are semantically related to the textual content; see page 298, col. 2, paragraph [2.2.2], lines 1-2).

As per claim 46, Hamandas discloses "the one or more sources of data comprise <u>at least one of</u> service request(s), newsgroup posting(s), ~~and/~~or search query log(s)" (i.e., queries collections; see page 301, col. 2, paragraph [3.3.3], lines 12-14).

As per claim 47, Hamandas discloses "metadata is semantically ~~and/~~or contextually related to associated ones of the one or more documents" (i.e., links in a hypermedia document share properties, relationships; see page 297, col. 1, lines 11-14).

As per claim 48, Hamandas discloses "the metadata comprises <u>at least one of</u> article title(s), product problem context, ~~and/~~or product problem resolution information" (In light the specification at [0032], the purposed of product problem resolution information is for formulating search query. The method for collecting search query is disclosed by Hamandas see page 300, col. 1, paragraph [3.2] up to col. 2, line 1), and "wherein calculating relevance further comprises weighting the article title(s) ~~and/~~or product problem context to indicate a greater relevance than any product problem resolution information" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 49, Hamandas discloses "calculating relevance further comprises assigning greater relevance to feature(s) of the metadata that occur in content of the data source with greater frequency as compared to the frequency of occurrence of other metadata features in the content" (In light the specification at [0039], the purposed of calculating relevance is for assigning weight, ranking to determine frequencies. The method of using statistic based on all possible combinations of weights is disclosed by Hamandas page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 50, Hamandas discloses "calculating relevance further comprises assigning greater weight to feature(s) of the metadata found in a document of the one or more documents as a function of an age of the document" (i.e., statistic based on all possible combinations of weights; see page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9).

As per claim 51, in addition to claims 1 and 4, Hamandas further discloses "identifying search queries from the search query log, wherein the search queries have a relatively high frequency of occurrence (FOO) to search the data source" (In light the specification at [0039], the purposed of calculating relevance is for assigning weight, ranking to determine frequencies. The method of using statistic based on all possible combinations of weights is disclosed by Hamandas page 301, col. 1, the entire paragraph [3.3.2] and Figs. 8 and 9);

"determining article(s) selected by an end-user from search query results, the article(s) being from the data source" (i.e., queries all images relevant to each query; see page 300, col. 1, paragraph [3.2], lines 1-3); and

"determining missing end-user selection(s), where a missing end-user selection is an article in the search query results that was not selected" (i.e., user's search; page 298, col. 2, last paragraph, lines 4-7).

Claim Objections / Allowable Subject Matter

Claims 13-14, 27-28, 41-42 and 52 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Applicant' Remarks/Arguments

Applicant's arguments with respect to the rejection(s) of claims under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Kirsch.

Claims as amended overcome the 35 U.S.C. 101 rejections. Thus, the rejections have been withdrawn.

CONTACT INFORMATION

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEAN B. FLEURANTIN whose telephone number is 571 – 272-4035. The examiner can normally be reached on 7:05 to 4:35.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 571 – 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jean Bolte Fleurantin

Patent Examiner

Technology Center 2100

April 10, 2007